

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

NIPPON SHINYAKU CO., LTD.,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 21-1015-JLH
)	
SAREPTA THERAPEUTICS, INC.)	DEMAND FOR JURY TRIAL
)	
Defendant.)	
<hr/>		
)	
SAREPTA THERAPEUTICS, INC. and THE)	
UNIVERSITY OF WESTERN AUSTRALIA,)	
)	
Defendant/Counter-Plaintiffs,)	
)	
v.)	
)	
NIPPON SHINYAKU CO., LTD.)	
and NS PHARMA, INC.,)	
)	
Plaintiff/Counter-Defendants.)	

FINAL JURY INSTRUCTIONS (PHASE I)

TABLE OF CONTENTS

	Page
1. GENERAL INSTRUCTIONS	1
1.1 INTRODUCTION	1
1.2 JURORS' DUTIES	2
1.3 EVIDENCE DEFINED	3
1.4 DIRECT AND CIRCUMSTANTIAL EVIDENCE	4
1.5 CONSIDERATION OF EVIDENCE	5
1.6 USE OF NOTES	6
1.7 CREDIBILITY OF WITNESSES	7
1.8 EXPERT WITNESSES	8
1.9 DEPOSITION TESTIMONY	9
1.10 BURDENS OF PROOF	10
2. THE PARTIES AND THEIR CONTENTIONS	11
3. PATENTS	12
3.1 PATENT CLAIMS GENERALLY	12
3.2 CLAIM CONSTRUCTION	13
4. PATENT INVALIDITY	14
4.1 PATENT INVALIDITY - GENERALLY	14
4.2 PERSON OF ORDINARY SKILL IN THE ART	15
4.3 PRIOR ART GENERALLY	16
4.4 OBVIOUSNESS	17
4.5 OBVIOUSNESS – THE FIRST FACTOR: SCOPE & CONTENT OF THE PRIOR ART	18
4.6 OBVIOUSNESS – SECOND FACTOR: DIFFERENCES BETWEEN THE CLAIMED INVENTION & THE PRIOR ART	19
4.7 OBVIOUSNESS – THE THIRD FACTOR: LEVEL OF ORDINARY SKILL	22
4.8 OBVIOUSNESS – THE FOURTH FACTOR: OTHER CONSIDERATIONS	23
4.9 WRITTEN DESCRIPTION	25
4.10 ENABLEMENT	27
5. INFRINGEMENT	29

TABLE OF CONTENTS
(continued)

	Page
5.1 WILLFUL INFRINGEMENT	29
6. DELIBERATION AND VERDICT	30
6.1 INTRODUCTION	30
6.2 UNANIMOUS VERDICT	31
6.3 DUTY TO DELIBERATE	32
6.4 SOCIAL MEDIA	33
6.5 EQUAL STANDING.....	34
6.6 COURT HAS NO OPINION.....	35

1. GENERAL INSTRUCTIONS

1.1 INTRODUCTION

Members of the jury, now it is time for me to instruct you about the law that you must follow in deciding the first phase of this case. Please listen very carefully to everything I say. In following my instructions, you must follow all of them, including the ones I gave to you on Friday and Monday at the start of the case and the ones I have given during trial. You may not single out some and ignore others. They are all important.

Each of you has been provided a copy of these instructions. You may read along as I deliver them if you prefer. You will have a written copy of these instructions with you in the jury room for your reference during deliberations. You will also have a verdict form, which will list the questions that you must answer to decide the first phase of this case. We will go over that later.

I will start by explaining your duties and the general rules that apply in every civil case. Then I will explain some rules that you must use in evaluating particular testimony and evidence. Then I will explain the positions of the parties and the law you will apply in this case. And last, I will explain the rules that you must follow during your deliberations in the jury room, and the possible verdicts that you may return in this phase of the case.

1.2 JURORS' DUTIES

You have two main duties as jurors. The first one is to decide what the facts are from the evidence that you saw and heard here in court. Deciding what the facts are is your job, not mine, and nothing that I have said or done during this trial was meant to influence your decision about the facts in any way. You are the sole judges of the facts.

Your second duty is to take the law that I give you, apply it to the facts, and decide under the appropriate burden of proof which party should prevail on the issues presented. I will instruct you about the burden of proof shortly. It is my job to instruct you about the law, and you are bound by the oath that you took at the beginning of the trial to follow the instructions that I give you, even if you personally disagree with them. This includes any instructions that I gave you before and during the trial, and these instructions. All of the instructions are important, and you should consider them together as a whole.

Perform these duties fairly. Do not guess or speculate, and do not let any bias, sympathy, or prejudice that you may feel toward one side or the other influence your decision in any way.

1.3 EVIDENCE DEFINED

You must make your decision based only on the evidence that you saw and heard here in the courtroom. Do not let rumors, suspicions, or anything else that you may have seen or heard outside of court influence your decision in any way.

The evidence in this case includes only what the witnesses said while they were testifying under oath, including deposition testimony that has been played by video or read to you, the exhibits that I allowed into evidence, and any facts that the parties agreed to by stipulation and I instructed you to accept as true.

Nothing else is evidence. The lawyers' statements and arguments are not evidence. The lawyers' questions and objections are not evidence. My legal rulings are not evidence. You should not be influenced by a lawyer's objection or by my ruling on that objection. None of my comments and questions are evidence. The notes taken by any juror are not evidence.

Certain reproductions, charts, summaries, and graphics have been used to illustrate certain evidence and testimony from witnesses. Unless I have specifically admitted them into evidence, those reproductions, charts, summaries, and graphics are not themselves evidence, even if they refer to, identify, or summarize evidence.

During the trial I may not have let you hear the answers to some of the questions that the lawyers asked. I also may have ruled that you could not see some of the exhibits that the lawyers wanted you to see. Sometimes I may have ordered you to disregard things that you saw or heard, or that I struck from the record. You must completely ignore all of these things. Do not speculate about what a witness might have said or what an exhibit might have shown. These things are not evidence, and you are bound by your oath not to let them influence your decision in any way. Make your decision based only on the evidence, as I have defined it here, and nothing else.

1.4 DIRECT AND CIRCUMSTANTIAL EVIDENCE

During the preliminary instructions, I told you about “direct evidence” and “circumstantial evidence.” I will now remind you what each means.

Direct evidence is evidence like the testimony of any eyewitness which, if you believe it, directly proves a fact. If a witness testified that she saw it raining outside, and you believed her, that would be direct evidence that it was raining.

Circumstantial evidence is a chain of circumstances that indirectly proves a fact. If someone walked into the courtroom wearing a raincoat covered with drops of water and carrying a wet umbrella, that would be circumstantial evidence from which you could conclude that it was raining.

It is your job to decide how much weight to give the direct and circumstantial evidence. The law makes no distinction between the weights that you should give to either one, nor does it say that one is any better evidence than the other. You should consider all the evidence, both direct and circumstantial, and give it whatever weight you believe it deserves.

1.5 CONSIDERATION OF EVIDENCE

You should use your common sense in weighing the evidence. Consider it in light of your everyday experience with people and events and give it whatever weight you believe it deserves. If your experience tells you that certain evidence reasonably leads to a conclusion, you are free to reach that conclusion.

1.6 USE OF NOTES

You may have taken notes during trial to assist your memory. As I instructed you at the beginning of the case, you should use caution in consulting your notes. There is generally a tendency to attach undue importance to matters which one has written down. Some testimony that may not seem important at the time presented, and thus not written down, may take on greater importance later in the trial in light of all the evidence presented. Therefore, your notes are only a tool to aid your own individual memory, and you should not compare notes with other jurors in determining the content of any testimony or in evaluating the importance of any evidence. Your notes are not evidence and are by no means a complete outline of the proceedings or a list of the highlights of the trial.

Above all, your memory should be the greatest asset when it comes time to deliberate and render a decision in this case.

1.7 CREDIBILITY OF WITNESSES

You are the sole judges of each witness's credibility. You may believe everything a witness says, or part of it, or none of it. You may consider each witness's means of knowledge; strength of memory; opportunity to observe; how reasonable or unreasonable the testimony is; whether it is consistent or inconsistent; whether it has been contradicted; the witness's biases, prejudices, or interests; the witness's manner or demeanor on the witness stand; and all circumstances that, according to the evidence, could affect the credibility of the testimony.

In determining the weight to give to the testimony of a witness, you may ask yourself whether there is evidence tending to prove that the witness testified falsely about some important fact or whether there was evidence that at some other time the witness said or did something, or failed to say or do something, that was different from the testimony he or she gave at the trial in person or by deposition testimony played by video or read to you. You have the right to distrust such witness's testimony, and you may reject all or some of the testimony of that witness or give it such credibility as you may think it deserves.

The weight of the evidence to prove a fact does not necessarily depend on the number of witnesses who testify.

1.8 EXPERT WITNESSES

During the trial, you heard testimony from expert witnesses. When knowledge or special skill in a technical or business subject matter might be helpful to the jury, a person who has that special training or experience in that technical or business field—called an expert witness—is permitted to state his or her opinion on those technical or business matters. However, you are not required to accept that opinion. As with any other witness, it is up to you to judge the credentials and credibility of the expert witness and decide whether to rely upon his or her testimony.

In weighing expert testimony, you may consider the expert's qualifications, the reasons for the expert's opinions, and the reliability of the information supporting the expert's opinions, as well as the factors I have previously mentioned for weighing testimony of any other witness. You may consider each expert opinion received in evidence in this case and give it such weight as you think it deserves. If you decide that the opinion of an expert witness is not based upon sufficient education and experience, or if you conclude that the reasons given in support of the opinion are not sound, or if you feel that the opinion is outweighed by other evidence, you may disregard the opinion in whole or in part.

1.9 DEPOSITION TESTIMONY

During the trial, certain testimony was presented to you through depositions that were read into evidence or presented as video. Regardless of how it was presented, this testimony must be given the same consideration you would give it had the witness appeared live in court. Like the testimony of a live witness, the statements made in a deposition are made under oath and are considered evidence that may be used to prove particular facts. The deposition testimony may have been edited or cut to exclude irrelevant testimony as the parties have only a limited amount of time to present you with the evidence. You should not attribute any significance to the fact that the deposition videos may appear to have been edited, or only portions were read into evidence.

1.10 BURDENS OF PROOF

In any legal action, facts must be proven by a required standard of evidence known as the “burden of proof.” In a case such as this, there are two different burdens of proof that are used. The first is called “clear and convincing evidence.” The second is called “preponderance of the evidence.” I told you about these two standards of proof during my preliminary instructions to you, and I will now remind you what they mean.

Nippon Shinyaku and NS Pharma, on one side, and Sarepta, on the other, are each challenging the validity of the other side’s asserted patents. Each side has the burden of proving that the asserted patents are invalid by clear and convincing evidence. Clear and convincing evidence means that it is highly probable that the fact is true. Proof by clear and convincing evidence is a higher burden of proof than a preponderance of the evidence.

In addition, Nippon Shinyaku and NS Pharma, on one side, and Sarepta, on the other, are each arguing that the other side’s infringement was willful. Each side has the burden of proving the other side’s willfulness by the preponderance of the evidence. That means that the parties have to prove to you, in light of all the evidence, that what they claim is more likely true than not true. Proof by preponderance of the evidence is a lower burden of proof than clear and convincing evidence.

You may have heard of the “beyond a reasonable doubt” burden of proof from criminal cases. That requirement is the highest burden of proof in our judicial system. It applies only in criminal cases and has nothing to do with a civil case like this one. You should therefore not consider it in this case.

2. THE PARTIES AND THEIR CONTENTIONS

As I did at the start of the case, I will first give you a summary of each side's contentions for this phase of the case. I will then provide you with detailed instructions on what each side must prove to win on each of its contentions.

NS Patent (U.S. Patent No. 10,385,092):

1. Whether Sarepta has proven by clear and convincing evidence that claim 3 of the NS Patent is obvious in light of Popplewell et al., *Comparative Analysis of Antisense Oligonucleotide Sequences Targeting Exon 53 of the Human DMD Gene: Implications for Future Clinical Trials*, 20(2) NEUROMUSCULAR DISORDERS 102 (2010) ("Popplewell 2010"); and/or Sazani et al., *Safety Pharmacology and Genotoxicity Evaluation of AVI-4658*, 29(2) INT'L J. TOXICOLOGY 143 (2010) ("Sazani 2010").
2. If Sarepta has not proven that claim 3 of the NS Patent is invalid, whether Nippon Shinyaku has proven by a preponderance of the evidence that Sarepta's infringement was willful.

Wilton Patent (U.S. Patent No. 9,994,851):

1. Whether Nippon Shinyaku and/or NS Pharma have proven by clear and convincing evidence that claim 1 of the Wilton Patent is invalid for lack of written description.
2. Whether Nippon Shinyaku and/or NS Pharma have proven by clear and convincing evidence that claim 1 of the Wilton Patent is invalid for lack of enablement.
3. If Nippon Shinyaku and NS Pharma have not proven that claim 1 of the Wilton Patent is invalid, whether Sarepta has proven by a preponderance of the evidence that Nippon Shinyaku's and NS Pharma's infringement was willful.

3. PATENTS

3.1 PATENT CLAIMS GENERALLY

Before you can decide many of the issues in this case, you will need to understand the role of the patent “claims.” The patent claims are the numbered sentences at the end of a patent. The claims are important because the words of a claim define the scope of the patent right. The figures and text in the rest of the patent provide a description and/or examples of the invention and provide a context for the claims, but the claims define the extent of the patent’s coverage.

Here, you will need to understand what each of the asserted claims covers in order to decide whether or not that claim is invalid.

3.2 CLAIM CONSTRUCTION

It is my job as a judge to define what the terms of the asserted claims mean and to instruct you about these meanings. You must accept the meanings I give you and apply those meanings to the issues that you are asked to decide. You must ignore any different interpretation given to these terms by the witnesses or by the attorneys. I instruct you that the following claim terms have the following definitions.

With respect to asserted Claim 1 of the Wilton Patent:

Term in the Wilton Patent	Court's Construction
"a base sequence that is 100% complementary to consecutive bases of a target region of exon 53"	"a base sequence that has 100% complementarity to consecutive bases of a target region of exon 53 throughout the entire length of the antisense oligonucleotide"
"a target region"	Plain and ordinary meaning, which means "a segment of the pre-mRNA"
"exon 53 of the human dystrophin pre-mRNA"	Plain and ordinary meaning, which means "the pre-mRNA transcribed from exon 53 of the human dystrophin gene"
"the target region is within annealing site H53A(+23+47) and annealing site H53A(+39+69)"	"the target region is within nucleotides +23 to +69 of exon 53 of the human dystrophin pre-mRNA"
"in which uracil bases are thymine bases"	"the antisense oligonucleotide has thymine bases instead of uracil bases"
"morpholino"	"phosphorodiamidate morpholino oligomer"

If I have not provided a specific definition for a given term, you are to use the ordinary meaning of that term. You should not take my definition of the language of the claims as an indication that I have a view regarding how you should decide the issues that you are being asked to decide, such as invalidity. These issues are yours to decide.

4. PATENT INVALIDITY

4.1 PATENT INVALIDITY -GENERALLY

I will now instruct you on the rules you must follow in deciding whether or not Nippon Shinyaku and NS Pharma, on one side, and Sarepta, on the other, have proven that the asserted claims of each other's patents are invalid. To prove that any claim of a patent is invalid, the party challenging validity must persuade you by clear and convincing evidence, that is, it must be highly probable that the claim is invalid.

4.2 PERSON OF ORDINARY SKILL IN THE ART

The question of invalidity of a patent claim is determined from the perspective of a hypothetical “person of ordinary skill in the art” in the field of the asserted invention as of the patent’s effective filing date.

To determine the validity or invalidity of the patent claims, you must consider the level of ordinary skill in the field of the invention at the time of the invention.

In this case, the parties agree that a person of ordinary skill in the art is:

An individual that has an M.D., Ph.D., or lower degree with expertise in molecular biology, biochemistry or a related area, and experience with neuromuscular or genetic diseases and/or designing and testing antisense oligonucleotides for splice-site switching/exon skipping applications. The POSA would have general knowledge of antisense oligonucleotide chemical modifications to the backbone, nucleobases and other manipulations that can alter the activity of the antisense molecule, as well as delivery methods for antisense oligonucleotides. A POSA would also have general knowledge regarding using antisense oligonucleotides in cell-free, cell-based and/or in vivo experiments, as well as DMD models and the use of antisense oligonucleotides to induce skipping of DMD exons to correct the open reading frame of the RNA transcripts.

4.3 PRIOR ART GENERALLY

I will now instruct you on a challenge to the NS Patent based on prior art. Under the patent laws, in order for someone to be entitled to a patent, the invention must actually be “new” and not obvious over what came before it, which is referred to as prior art. Prior art is considered in determining whether the claims of the asserted patents are anticipated or obvious. Prior art may include items that were publicly known or that have been publicly used or offered for sale before the patent’s priority date, or references, such as publications or patents, published before the patent’s priority date that disclose the claimed invention or elements of the claimed invention.

Sarepta contends that the following is prior art against the NS Patent:

- Popplewell et al., *Comparative Analysis of Antisense Oligonucleotide Sequences Targeting Exon 53 of the Human DMD Gene: Implications for Future Clinical Trials*, 20(2) NEUROMUSCULAR DISORDERS 102 (2010) (“Popplewell 2010”);
- Sazani et al., *Safety Pharmacology and Genotoxicity Evaluation of AVI-4658*, 29(2) INT’L J. TOXICOLOGY 143 (2010) (“Sazani 2010”).

4.4 OBVIOUSNESS

Sarepta contends that the asserted NS Patent claim is invalid because the claimed invention would have been “obvious.”

A claimed invention is invalid as “obvious” if it would have been obvious to a person of ordinary skill in the art in the field of the invention as of August 31, 2011. Obviousness may be shown by considering one or more than one item of prior art.

In deciding obviousness, you must avoid using hindsight; that is, you should not consider what is known today or what was learned from the teachings of the patent. You should not use the patent as a road map for selecting and combining items of prior art. You must put yourself in the place of a person of ordinary skill in the art as of August 31, 2011.

The following factors must be evaluated to determine whether Sarepta has established that the claimed invention is obvious:

1. The scope and content of the prior art relied upon by Sarepta;
2. The differences, if any, between the asserted claim of the NS Patent that Sarepta contends is obvious and the prior art;
3. The level of ordinary skill in the art as of August 31, 2011; and
4. Additional considerations, if any, that indicate that the claim was obvious or not obvious.

Each of these factors must be evaluated, although they may be analyzed in any order. Sarepta must prove by clear and convincing evidence that the invention would have been obvious.

I will now explain each of the four factors in more detail.

4.5 OBVIOUSNESS – THE FIRST FACTOR: SCOPE & CONTENT OF THE PRIOR ART

In deciding obviousness, the parties agree that the prior art includes the following items received into evidence during the trial:

- Popplewell et al., *Comparative Analysis of Antisense Oligonucleotide Sequences Targeting Exon 53 of the Human DMD Gene: Implications for Future Clinical Trials*, 20(2) NEUROMUSCULAR DISORDERS 102 (2010) (“Popplewell 2010”);
- Sazani et al., *Safety Pharmacology and Genotoxicity Evaluation of AVI-4658*, 29(2) INT’L J. TOXICOLOGY 143 (2010) (“Sazani 2010”).

4.6 OBVIOUSNESS – SECOND FACTOR: DIFFERENCES BETWEEN THE CLAIMED INVENTION & THE PRIOR ART

You should analyze whether there are any relevant differences between the prior art and the claimed invention from the view of a person of ordinary skill in the art as of August 31, 2011. Your analysis must determine the impact, if any, of such differences on the obviousness or non-obviousness of the claimed invention as a whole, and not merely some portion of it.

In analyzing the relevance of the differences between the claimed invention and the prior art, you do not need to look for precise teaching in the prior art directed to the subject matter of the claimed invention. You may consider the inferences and creative steps that a person of ordinary skill in the art would have employed in reviewing the prior art as of August 31, 2011. For example, if the claimed invention combined elements known in the prior art and the combination yielded results that were predictable to a person of ordinary skill in the art at the time of the invention, then this evidence would make it more likely that the claim was obvious. On the other hand, if the combination of known elements yielded unexpected or unpredictable results, or if the prior art teaches away from combining the known elements, then this evidence would make it more likely that the claim that successfully combined those elements was not obvious.

Importantly, a claim is not proven obvious merely by demonstrating that each of the elements was independently known in the prior art. Most, if not all, inventions rely on building blocks long known, and claimed discoveries almost of necessity will likely be combinations of what is already known. Therefore, you should consider whether a reason existed at the time of the invention that would have prompted a person of ordinary skill in the art in the relevant field to combine the teachings in the way the claimed invention does. The reason could come from the prior art, the background knowledge of one of ordinary skill in the art, the nature of any problem or need to be addressed, market demand, or common sense.

If you find that a reason existed as of August 31, 2011, to combine the elements of the prior art to arrive at the claimed invention, and there would have been a reasonable expectation of success for doing so, this evidence would make it more likely that the claimed invention was obvious.

Similarly, you may consider the possibility that a reference teaches away from the claimed invention. A reference teaches away from the invention when it would have discouraged a person of ordinary skill in the art as of August 31, 2011, from practicing the claimed invention, or when such a person would be led in a different direction than practicing the claimed invention.

In comparing the scope and content of each prior art reference to a patent claim, you may find that inherency may supply a claim element that is otherwise missing from the explicit disclosure of a prior art reference. The inherent presence of an element so found by you may be used in your evaluation of whether the claimed invention would have been obvious in view of the prior art. But, to rely on inherency to establish the existence of a claim element in the prior art in an obviousness analysis, that element necessarily must be present in, or the natural result of, the combination of elements explicitly disclosed by the prior art. Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from an explicit disclosure is not sufficient to find inherency. However, if the disclosure is sufficient to show that the natural result flowing from the explicit disclosure would result in the claim element in question, inherency may be found. Something inherent from the explicit disclosure of the prior art must be limited when applied in an obviousness analysis and used only when the inherent element is the natural result of the combination of prior art elements explicitly disclosed. An important consideration when determining whether a reference inherently discloses a previously unknown property of something is whether that property is unexpected. Although all properties of something

are inherently part of that thing, if a property is found to be unexpectedly present, then the property may be nonobvious.

4.7 OBVIOUSNESS – THE THIRD FACTOR: LEVEL OF ORDINARY SKILL

To determine the obviousness of the invention, you must determine the level of ordinary skill in the field of the invention at the time of August 31, 2011. As mentioned earlier, you must consider and assess this factor before reaching your conclusion in this case.

The person of ordinary skill is presumed to know all prior art that you have determined to be reasonably relevant. The person of ordinary skill is also a person of ordinary creativity that can use common sense to solve problems.

4.8 OBVIOUSNESS – THE FOURTH FACTOR: OTHER CONSIDERATIONS

As part of deciding the issue of obviousness for the claimed invention, you must also consider certain factors, which may help to determine whether the invention would have been obvious. These factors are sometimes referred to as secondary considerations of non-obviousness. No factor alone is dispositive, and you must consider the obviousness or non-obviousness of the invention as a whole. Certain of these factors include:

1. Were products covered by the claim commercially successful due to the merits of the claimed invention rather than due to advertising, promotion, salesmanship, or features of the product other than those found in the claim?
2. Was there a long-felt need for a solution to the problem facing the inventors, which was satisfied by the claimed invention?
3. Did others try, but fail, to solve the problem that was solved by the claimed invention?
4. Did others copy the claimed invention?
5. Did the claimed invention achieve unexpectedly superior results over the closest prior art?
6. Did others in the field praise the claimed invention or express surprise at the making of the claimed invention?

Answering all, or some, of these questions “yes” may suggest that the claim was not obvious. These factors are relevant only if there is a direct connection, or nexus, between the factor and the invention covered by the patent claim. Even if you conclude that some of the above factors have been established, those factors should be considered along with all the other evidence in the case in determining whether Sarepta has proven that the claimed invention would have been obvious.

There are also factors that, if established, may suggest that the claim was obvious. One such factor is whether the claimed invention was independently and simultaneously invented within a comparatively short amount of time. If you answer “yes” to that question, it may suggest that the claim was obvious.

4.9 WRITTEN DESCRIPTION

The patent law contains certain requirements for the part of the patent called the specification. The written description requirement is designed to ensure that the inventor was in possession of the full scope of the claimed invention as of the patent's effective filing date. Nippon Shinyaku and NS Pharma contend that the asserted claim of the Wilton Patent does not contain an adequate written description of the claimed invention. To succeed, Nippon Shinyaku and NS Pharma must show by clear and convincing evidence that a person having ordinary skill in the field reading the patent specification as of the patent's effective filing date of June 28, 2005, would not have recognized that it describes the full scope of the invention as it is finally claimed in the asserted claim of the Wilton Patent. If a patent claim lacks adequate written description, it is invalid.

In deciding whether the patent satisfies this written description requirement, you must consider the description from the viewpoint of a person having ordinary skill in the field of technology of the patent as of the effective filing date. The specification must describe the full scope of the claimed invention, including each element thereof, either expressly or inherently. A claimed element is disclosed inherently if a person having ordinary skill in the field as of the effective filing date would have understood that the element is necessarily present in what the specification discloses.

The written description does not have to be in the exact words of the claim. The requirement may be satisfied by any combination of the words, structures, figures, diagrams, formulas, etc., contained in the patent specification. Adequate written description does not require either examples or an actual reduction to practice of the claimed invention. However, a mere wish or plan for obtaining the claimed invention is not adequate written description. Rather, the level of disclosure required depends on a variety of factors, such as the existing knowledge in the particular

field, the extent and content of the prior art, the maturity of the science or technology, and other considerations appropriate to the subject matter.

In this case, the asserted claim of the Wilton Patent is directed to a class of molecules that meet the claim limitations, which can be referred to as a “genus.” One way to consider whether the combination of words, structures, figures, diagrams, formulas, etc. contained in the patent specification sufficiently describes the genus is to assess whether the specification includes a representative number of species falling within the scope of the claimed invention sufficient to encompass the breadth of the genus. The specification generally need not describe every species in a genus in order to satisfy the written description requirement. However, when there is substantial variation within the claimed genus, the specification must describe a sufficient variety of species to reflect the variation within the genus.

Another way to consider whether the written description is sufficient is to assess whether the patent specification identifies structural features common to the members of the claimed genus so that a person of ordinary skill in the art can “visualize or recognize” the members of the claimed invention. The written description requirement is satisfied in the above circumstance when there is an established correlation between structure and function described in the specification or known in the art at the time of filing.

4.10 ENABLEMENT

The patent law has another requirement for the specification called the enablement requirement. Nippon Shinyaku and NS Pharma contend that the asserted claim of the Wilton Patent is invalid because the specification does not “enable” the full scope of the claimed invention. To succeed, Nippon Shinyaku and NS Pharma must show by clear and convincing evidence that the specification of the Wilton Patent does not contain a sufficiently full and clear description to have allowed a person having ordinary skill in the field of technology of the patent to make and use the full scope of the claimed invention as of the effective filing date, here June 28, 2005, without undue experimentation. If a patent claim is not enabled, it is invalid.

The question of reasonable experimentation is a matter of degree, and what is required is that the amount of experimentation not be “unduly extensive.” Some amount of experimentation to make and use the invention is allowable. In deciding whether a person having ordinary skill would have to experiment unduly in order to make and use the invention, you may consider several factors:

1. The time and cost of any necessary experimentation;
2. How routine any necessary experimentation is in the field;
3. Whether the patent discloses specific working examples of the claimed invention;
4. The amount of guidance presented in the patent;
5. The nature and predictability of the field;
6. The level of ordinary skill in the field; and
7. The nature and scope of the claimed invention.

No one or more of these factors is alone dispositive. Rather, you must make your decision about whether or not the degree of experimentation required is undue based upon all of the evidence presented to you. You should weigh these factors and determine whether or not, in the

context of this invention and the state of the art at the time of the effective filing date, a person having ordinary skill in the art would need to experiment unduly to make and use the full scope of the claimed invention.

5. INFRINGEMENT

5.1 WILLFUL INFRINGEMENT

In this case, Sarepta acknowledges that it infringes the NS Patent, and Nippon Shinyaku and NS Pharma acknowledge that they infringe the Wilton Patent. Nippon Shinyaku argues that Sarepta has willfully infringed the NS Patent, and Sarepta argues that Nippon Shinyaku and NS Pharma have willfully infringed the Wilton Patent. If you find that the asserted claim of the NS Patent or the asserted claim of the Wilton Patent has not been proved to be invalid, you must address whether or not the other side's infringement of the claim was willful.

To prove willful infringement of a claim, the party asserting infringement must persuade you that it is more likely true than not that the infringer intentionally infringed at least one asserted claim. You must base your decision on the infringer's knowledge and actions at the time of infringement. Evidence that the infringer had knowledge of the patent at the time of infringement, by itself, is not sufficient to show willfulness. Rather, to show willfulness, you must find that the infringer engaged in additional conduct evidencing a deliberate disregard of the patent rights of the party asserting infringement.

In deciding whether the infringer willfully infringed, you may consider all of the facts surrounding the infringement including: whether the infringer intentionally copied the patented technology in developing its accused product; whether the infringer knew, or should have known, that its conduct involved an unreasonable risk of infringement of the asserted patent; and whether the infringer had a reasonable belief that at the time of infringement that its product did not infringe the asserted patent or that the patent was invalid.

6. DELIBERATION AND VERDICT

6.1 INTRODUCTION

I have concluded my instructions on the law for the first phase of the case. All of the instructions I gave you previously today - as well as earlier during trial - still apply, and you will have a copy of the instructions with you in the jury room.

Now let me finish up by explaining some things about your deliberations in the jury room, and your possible verdicts.

Once you start deliberating, do not talk to the jury officer, or to me, or to anyone else except each other about the case. If you have any questions or messages, you must write them down on a piece of paper, sign them, and then give them to the jury officer. The officer will give them to me, and I will respond as soon as I can. I may have to talk to the lawyers about what you have asked, so it may take some time to get back to you. Any questions or messages normally should be sent to me through your foreperson, who by custom of this Court is Juror No. 1.

One more thing about messages. Do not ever write down or tell anyone how you stand on your votes. For example, do not write down or tell anyone that you are split 4-4, or 6-2, or whatever your vote happens to be. That should stay secret until you are finished.

6.2 UNANIMOUS VERDICT

Your verdict must represent the considered judgment of each juror. In order for you as a jury to return a verdict, it is necessary that each juror agree to the verdict. Your verdict must be unanimous.

It is your duty, as jurors, to consult with one another and to deliberate with a view towards reaching an agreement, if you can do so consistent with your individual judgment. Each of you must decide the case for yourself, but do so only after an impartial consideration of the evidence with your fellow jurors. In the course of your deliberations, do not hesitate to reexamine your own views and change your opinion, if convinced it is erroneous. But do not surrender your honest conviction as to the weight or effect of evidence solely because of the opinion of your fellow jurors, or for the purpose of returning a verdict. Remember at all times that you are not partisans. You are judges of the facts. Your sole interest is to seek the truth from the evidence in the case.

A verdict form has been prepared for you. You will take this form to the jury room, and when you have reached unanimous agreement as to your verdict, you will have your foreperson fill in, date, and sign the form. The rest of you will then sign the form. Thereafter, you will return to the courtroom, and my deputy will read aloud your verdict.

And I will remind you that nothing said in these instructions, and nothing in the form of a verdict, is meant to suggest or convey in any way or manner any intimation as to what verdict I think you should find. What the verdict shall be is your sole and exclusive duty and responsibility.

6.3 DUTY TO DELIBERATE

Now that all the evidence is in and the arguments are completed, you are free to talk about the case in the jury room. In fact, it is your duty to talk with each other about the evidence, and to make every reasonable effort you can to reach a unanimous agreement. Talk with each other, listen carefully and respectfully to each other's views, and keep an open mind as you listen to what your fellow jurors have to say.

Try your best to work out your differences. Do not hesitate to change your mind if you are convinced that other jurors are right and that your original position was wrong. But do not ever change your mind just because other jurors see things differently, or just to get the case over with. In the end, your vote must be exactly that – your own vote. It is important for you to reach unanimous agreement, but only if you can do so honestly and in good conscience.

If any member of the jury took notes, let me remind you that notes are not given any greater weight than the memory or impression of each juror as to what the testimony may have been. Whether you took notes or not, each of you must form and express your own opinion as to the facts of the case.

No one will be allowed to hear your discussions in the jury room, and no record will be made of what you say. So you should all feel free to speak your minds. Listen carefully to what the other jurors have to say, and then decide for yourself.

I am going to remind you now, if you go home this evening before rendering your verdict in this phase of the case and resume your deliberations tomorrow, you are not to talk about the case among yourselves or with anyone else during the recess. You may not read or listen to any news about the case in a newspaper, online, through any news apps, on the radio, through any social media, in blogs, or on television during the recess.

6.4 SOCIAL MEDIA

During your deliberations, you must not communicate with or provide any information to anyone by any means about this case. You may not use any electronic device or media, such as a telephone, cell phone, smartphone, iPhone, iPad, tablet, or computer; the Internet or any Internet service; any text or instant messaging service; or any Internet chat room, blog, or website, such as Facebook, LinkedIn, YouTube, Instagram, Snapchat, or X/Twitter, to communicate to anyone any information about this case, or to conduct any research about this case, until I accept your verdict. In other words, you cannot talk to anyone on the phone, correspond with anyone, or electronically communicate with anyone about this case. You can only discuss the case in the jury room with your fellow jurors during deliberations.

6.5 EQUAL STANDING

Remember that, in a very real way, you are the judges of the facts. Your only interest is to seek the truth from the evidence in the case. You should consider and decide this case as a dispute between persons of equal standing in the community, of equal worth, and holding the same or similar stations in life. A corporation is entitled to the same fair trial as a private individual. All persons, including corporations and other organizations, stand equal before the law and are to be treated as equals.

6.6 COURT HAS NO OPINION

Let me finish by repeating something I said to you earlier. Nothing that I have said or done during this trial was meant to influence your decision in any way. You must decide the case yourselves based on the evidence presented.

Finally, if I have read any of these instructions inconsistently with the written text, you are to rely on the written instructions in your deliberations.